REMARKS

This amendment is responsive to the Final Office Action dated May 2, 2008. Applicant has amended claims 1–6, 11–16, 23–29, 37, 38, 40, 42, 48, 50–53 and 55. Claims 1–59 are pending.

Interview Summary

Applicant would like to thank the Examiner for discussing the Office Action via telephonic interview on March 12, 2008. Examiner Cloud and Applicant's representatives, Mr. Sieffert and Mr. Gage, participated in the interview. During the telephonic interview, the previous Office Action dated February 26, 2008 was discussed. In particular, Applicant's representatives noted that the Examiner failed to address claims 56–59 in the previous Office Action and requested that the Examiner issue a supplemental Office Action responsive to these claims 56-59. The Examiner agreed to send a supplemental Office Action responsive to claims 56–59.

Claim Objection

In the Final Office Action, the Examiner objected to claim 55 because it is dependent upon itself. Applicant has amended claims 55 such that it now depends from claim 54 and not on itself. Consequently, Applicant requests withdrawal of the objection against claim 55.

Claim Rejection Under 35 U.S.C. § 102

In the Final Office Action, the Examiner rejected claims 1-59 under 35 U.S.C. 102(e) as being anticipated by Vasavada (US 2004/0078619). Applicant traverses the rejection to the extent such rejection may be considered applicable to the amended claims. Vasavada fails to disclose each and every feature of the claimed invention, as required by 35 U.S.C. 102(e), and provides no teaching that would have suggested the desirability of modification to include such features.

For example, Vasavada fails to teach or suggest a method comprising managing state information within a primary control unit included within a device, wherein the state information

comprises information representing a current state of a consumer *included within the device*, and receiving, with the primary control unit, a change to the state information.

Vasavada further fails to teach or suggest the method also comprising, prior to communicating the change to the consumer of the state information included within the device, communicating to a standby control unit included within the device the change performed by the primary control unit to the state information to synchronize the state information between the primary and standby control units, Further, Vasavada fails to teach or suggest after synchronizing the state information between the primary and standby control units, communicating, with the primary control unit, the change to the consumer to update state information maintained within the consumer with the change.

As a preliminary matter, Applicant notes that the Examiner appears to overlook substantive limitations of Applicant's independent claims, either as previously presented or currently amended. As one example, the Examiner appears to disregard Applicant's limitation of a consumer ***included within the device***. This is improper. Applicant's make clear that all of: (1) the primary control unit, (2) the standby control unit, and (3) the consumer are components of the same network device. As such, Applicant's claims are directed to techniques and structures for maintaining and communicating state information to components within a network device. The Examiner has continually overlooked these elements and has failed to address Applicant's arguments with respect to these claim requirements.

In rejecting Applicant's previously presented claim 1, for example, the Examiner provides no citation to Vasavada directed at this limitation but instead provides two parenthesis but no caption within these parenthesis (*see*, for example, the "()" in rejecting Applicant's requirement (i) of claim 1). MPEP 706.02, section V, clearly requires that "for anticipation under 35 U.S.C. 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly." None of the other cited portions of Vasavada cited by the Examiner teach or suggest a consumer included within the device, as required by Applicant's currently amended claim 1. The Examiner has failed to address this limitation, as required by MPEP 706.02, and therefore the rejection maintained by the Examiner against Applicant's claims is improper. In fact, it appears that the Examiner was unable to provide any support for this assertion.

To forward prosecution, however, Applicant continues to traverse the rejection as if the rejection was properly presented. Applicant notes that Vasavada is directed to synchronizing a routing protocol between an active processor and a standby processor.[1] As above, Applicant can find no mention in Vasavada of any form of a consumer ***included within the device***, much less a primary control unit that maintains state information representing a current state of the consumer included within the device, as required by Applicant's currently amended claim 1.

Instead, Vasavada maintains IS-IS protocol information concerning links or routes through a network external to the device.[2] This protocol information may also include interface level protocol information that describes configurations of circuits (or interfaces) presumably included within the device.[3] Paragraph [0026] of Vasavada provides, as an example, that the interface level protocol information may describe the state of each of the circuits as either "enabled or disabled."

While this information may be construed as state information, Vasavada provides no discussion as to how such information is maintained and communicated to all of: (1) a primary control unit, (2) a standby control unit, and (3) an additional *consumer*, all of which are components of the same network device, as required by Applicant's currently amended claim 1. That is, the protocol information of Vasavada merely describes whether an interface is enabled or not, i.e.., its current state. Vasavada does not describe the interface or other component as a *consumer* of the state information. Moreover, Vasavada certainly fails to teach or suggest the specific claimed techniques of claim 1 in which the primary control unit firs receives a change to the state information, and *prior to communicating the change to the consumer of the state information included within the device, communicating toa standby control unit included within the device the change performed by the primary control unit to the state information to synchronize the state information between the primary and standby control units.*

Applicant further notes that the above information is maintained in Vasavada in accordance with the IS-IS routing protocol, which requires the states of the interfaces so as to inform neighboring devices of paths through the network. In other words, the states of the

[1] Abstract.
[2] ¶s [0005] and [0008].
[3] ¶ [0026].

interfaces may determine whether a link is available or unavailable and, by conveying this state in a link state packet (LSP), neighboring routers may determine whether to route packets via the link. Paragraph [0017] of Vasavada sets out the IS-IS operations and describes the above exchange of LSPs between so-called "adjacent" or neighboring devices. Yet, Vasavada does not teach that these states are not consumed by the interfaces (and therefore the interfaces cannot be characterized as a "consumer") or any other component of the router other than an active control card 12 (primary) and a standby control card 18. Rather, the Examiner seems to rely on the notion that the routing information is communicated to (i.e., "consumed" as argued by the Examiner) by neighboring or adjacent network devices. At best, therefore, Vasavada describes consumers that ***are external from the device*** not included within the device by describing conventional exchange of routing information between different network routers. This is unrelated to and fails to teach or suggest Applicant's claimed techniques and structures for maintaining and communicating state information to components of a network device, as required by Applicant's currently amended claim 1.

In addition, Applicant has, for purposes of forwarding prosecution, amended each of the independent claims to make the relationship of a consumer and the primary and secondary control units even more clear. For example, Applicant's currently amended claim 1 requires that the primary control unit receive a change to the state information and, after synchronizing the state information between the primary and standby control units to reflect this change, the primary control unit communicates the change to the consumer to update state information maintained within the consumer. Thus, this further makes clear that, after synchronizing the state information between the primary and standby control units of a network device, the state information is then communicated to a consumer within that same network device so as to update consumer state information maintained by that consumer.

For many of the same reasons described above, Vasavada fails to teach or suggest communicating the change to the consumer to update state information maintained within the consumer with the change, as required by Applicant's currently amended claim 1. As stated above, the primary or active processor of the Vasavada device maintains and communicates the protocol information with an adjacent router ***external from the device***. The active processor of Vasavada however does not communicate the information to a consumer ***included within the***

device, much less to a consumer to update separate consumer state information maintained within the consumer with the change, as required by Applicant's currently amended claim 1.

Applicant submits that at least some of the arguments made above with respect to claim 1 apply to each of currently amended independent claims 16, 26, 42 and 51.

For example, Vasavada fails to teach or suggest a method comprising maintaining, with a primary control unit of a device, state information within a temporally-ordered data structure, wherein the state information comprises information representing a current state of a consumer included within the device, communicating a portion of the state information that corresponds to a change in the state information to the consumer included within the device so as to update consumer state information maintained by the consumer with the change, and encoding a commit proposal and a commit marker within the temporally-ordered data structure to identify the portion of the state information communicated to the consumer, as required by Applicant's currently amended claim 16.

As another example, Vasavada fails to teach or suggest a device comprising a primary control unit, a standby control unit, and a consumer, wherein the primary control unit manages state information, receives a change to the state information, communicates the change to the state information to the standby control unit before communicating the changes to the consumer to synchronize the state information between the primary and standby control units, and after synchronizing the state information between the primary and standby control units, communicates the change to the consumer to update consumer state information maintained within the consumer with the change, and wherein the state information comprises information representing a current state of the consumer included within the device, as required by Applicant's currently amended claim 26.

As yet another example, Vasavada fails to teach or suggest a device comprising a consumer, a memory to store state information, and a control unit to maintain the state information within a temporally-ordered data structure, wherein the control unit communicates a portion of the state information that corresponds to a change in the state information to the consumer so as to update consumer state information maintained by the consumer with the change, and encodes a commit proposal and a commit marker within the data structure to identify the portion of the state information within the temporally-ordered data structure, and wherein the

state information comprises information representing a current state the consumer included within the device, as required by Applicant's currently amended claim 42.

As still yet another example, Vasavada fails to teach or suggest a computer-readable medium comprising instructions for causing a primary control unit to manage state information stored within the primary control unit included within a device, wherein the state information comprises information representing a current state of the consumer included within the device, receive a change to the state information, communicate the change to the state information in accordance with an order that requires the changes to be communicated to the standby control unit before communicating the changes to the consumer of the state information included within the device such that the state information is synchronized between the primary and standby control units, and after synchronizing the state information between the primary and standby control units, communicate the change to the consumer to update consumer state information maintained within the consumer with the change, as required by Applicant's currently amended claim 51.

Applicant further submits that the arguments made above with respect to Applicant's independent claims 1, 16, 26, 42 and 51 also apply to each of Applicant's dependent claims 2–15, 17–25, 27–41, 43–50 and 52–59 by virtue of these claims depending, respectively, from independent claims 1, 16, 26, 42 and 51. Applicant notes, however, that the dependent claims recite numerous additional features the further distinguish the claimed invention from Vasavada.

For example, Applicant's claim 3 requires managing the state information within a temporally-ordered data structure. The Examiner, in rejecting this claim, merely refers to FIG. 3 of Vasavada to suggest a temporally-ordered data structure. FIG. 3 of Vasavada, however, is described as a ***flow diagram*** of steps for transferring protocol information from an Active process to a Standby process.[4] Applicant fails to understand how (and requests that the Examiner please clarify the extent to which) a flow diagram suggests a temporally-ordered data structure.

While Vasavada shows in FIG. 3 the steps of a failover, Vasavada is, in fact, silent with regard to managing data for synchronization between the active and standby processor. Vasavada illustrates some functional aspects in FIG. 2, but none of those aspects indicate how

[4] ¶ [0013].

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the data is managed, let alone managing the data or state infomraiton within a temporally-ordered data structure, as required by Applicant's claim 3. The Examiner also cites to paragraph [0030] of Vasavada, but again this paragraph makes no mention of a temporally-ordered data structure. Apparently, the Examiner has characterized this limitation of Applicant's claim 3 so broadly as to encompass simply managing state information, but fails to read in the limitation that this data is managed within a temporally-ordered data structure. This is improper.

Vasavada, therefore, fails to disclose each and every limitation set forth in claims 1–59. For at least these reasons, the Examiner has failed to establish a prima facie case for anticipation of Applicant's claims 1–59 under 35 U.S.C. 102(b). Withdrawal of this rejection is requested.

CONCLUSION

All claims in this application are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims. Please charge any additional fees or credit any overpayment to deposit account number 50-1778. The Examiner is invited to telephone the below-signed attorney to discuss this application.

Date:

August 4, 2008

By:

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